

Problems of Creativity Development Methodology in Educational Practice

(About one of the Examples of Contradictions in the Modern System of Education)

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The article reflects the contradictions that characterize the current state of Russian education system. It is believed that the abolition of the Bologna system of education will contribute to the restoration of its former high level. However, the material we have cited from a survey of leading teachers points to deeper reasons for its decline. First of all, it should be noted the orientation towards the introduction into pedagogy of a system of basic indicators of child development seen as a part of the dominant American concept of behaviorism, which explains the development of the cognitive process and creativity tvorchestvo – in Russian only by an associative process. Studies, presentations at the conferences, and a survey the author conducted among Russian teachers show that, assuming a higher role in the development of “creativity” than in the development of tvorchestvo or “creative skills”, teachers actually form among students a significant attitude towards creativity. The concepts of tvorchestvo and “creativity”, unfortunately, are considered the same thing in the scientific world. Confusing these concepts, a professional Russian teacher contradicts the scientifically based Russian methodology, which is a decisive factor in the development of education in Russia.

Keywords: theory, practice, education, educational program, non-standard thinking, creative abilities, creativity.

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Проблемы методологии развития творчества в практике образования

(Об одном из примеров противоречий в современной системе образования)

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В статье отражены противоречия, характеризующие современное состояние отечественной системы образования. Считается, что отмена Болонской системы образования позволит способствовать восстановлению прежнего высокого ее уровня. Однако приведенный нами материал опроса передовых учителей указывает на более глубокие причины ее упадка. В первую очередь, следует отметить ориентацию на внедрение в педагогику системы основных показателей развития ребенка, разработанных в доминирующей в Америке концепции бихевиоризма, сводящего развитие познавательного процесса и творчества (креативности) лишь к ассоциативному процессу. Примеры отождествления учителями понятий творчества и креативности (по Дж. Гилфорду) в докладах на ряде

конференций и по результатам проведенного автором опроса демонстрируют, что, предполагая более высокую роль в развитии «креативности», чем «творческих способностей», педагоги фактически формируют у школьников значимое отношение к этому понятию. Наивно веря в тождественность понятий «творчество» и «креативность», что, к сожалению, усиливает уже сложившаяся традиция и в научном мире, профессиональный педагог фактически противоречит научно обоснованной отечественной методологии как решающего фактора развития российского образования.

Ключевые слова: теория, методология, практика, образование, программа, нестандартное мышление, творческие способности, креативность.

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Introduction

The article is aimed at discussing the contradictions between the real educational practice of modern Russia and the prospects for the educational policy of the national system of teacher education: the social need for a unified strategy for planning and developing educational programs of pedagogical universities in the current areas of teacher training of the future. One of the priority areas in the field of education is the development of *tvorchestvo* in all areas of activity.

The need to solve this problem requires a scientifically based approach that ensures the effectiveness of pedagogical practice. However, real examples of everyday understanding of creativity and creativity in the reports of leading teachers at a number of modern scientific and practical conferences prompted us to conduct a survey of teachers from different regions of the country. The survey offered an answer to 2 questions: 1. What pedagogical technologies are your priority? 2. Describe how you understand the correlation between the concepts of “*tvorchestvo*” and “creativity”.

The article provides the most complete and characteristic answers to our questions.

Practice without theory

Respondent 1. Question 1. Creating an educational environment for elementary school students is a necessary condition for the development of students' intellectual abilities. It is in elementary school that the basis for the formation of skills and abilities of students is laid. It is based on an approach that promotes the ability of students to set educational and individual goals. This approach can be considered on the example of a collective creative process. It develops the creative abilities of students, their creative skills, non-standard thinking.

Question 2. To determine the creative abilities of elementary school students, we consider the following features important: 1. how quickly a child can complete

a task, how many solutions can be offered to students; whether the answers are different or the same; 2. originality of thought (the answer is evaluated in comparison with the answers of other students). As for the definition of creativity, we leave the consideration and study of this issue to ourselves for the future. In our work, we rely on the work of the author, who defended his Ph.D. thesis on this topic.

Respondent 2. Question 1. Work to involve younger students in research activities. We have developed a course to expand students' understanding of the role of experiment, modeling and research in physics. The tasks of forming a stable understanding of the importance of a physical experiment among students, as well as demonstrating to students that experimental work is a criterion for the truth of the knowledge gained by means of revealing their practical application are set. The course contributes to the development of interest in the study of physics in their free time from studies. The two main directions are solving Olympiad problems and writing project work. To perform these activities, the student must apply creative, non-standard thinking. From here, students increase self-esteem, develop creative abilities, creative skills, and communication.

Question 2. Creativity is the ability to express yourself in the performance of tasks.

Respondent 3. Question 1. Development of cognitive interest among students. It is important that a modern graduate, in addition to mastering a set of knowledge, be able to easily apply them in real life situations, have creative potential, and be able to think outside the box. One of the goals of the teacher is the intellectual education of schoolchildren, which includes the development of cognitive interest, the development of critical thinking. Thus, special attention is paid to the formation and development of cognitive interest in classroom and extracurricular activities, since it is he who is the stimulus for successful learning. An important task of the teacher is to interest the child, to involve him in scientific activities.

Question 2. It is necessary to develop students' critical and creative thinking, which are associated with a

number of skills and abilities: the ability to plan activities, choosing the most successful way to solve a problem, analyze, process the information provided and express their point of view about what they heard, read (in such In this case, creative project work on the consciousness of communities in the VC, which we use, is connected precisely with the processing of information). Compilation of reviews in the format of video advertising, discussions, round tables encourage you to argue your point of view. Among other things, it seems that the tasks in question, one way or another, set the child the task of finding a solution on their own. This is a kind of "challenge" that requires not a mechanical reproduction of what has been memorized, but a processing of the information provided. Therefore, creativity is the ability to solve tasks in a non-standard way in everyday life. This is due to the imagination, which helps to find a way out of various situations, both educational and everyday. It is rather difficult to separate from the concept of creativity, in my opinion, these are related concepts. I will consider this issue further.

Respondent 4. Question 1. The key element of the modernization of the Russian school is the federal state educational standard, which imposes a requirement on the organization of research activities of schoolchildren as an effective method of developing the ability of students to independently acquire new knowledge. To prepare a research work with a child, the teacher uses the method of developing creative thinking as one of the components of functional literacy. Research work at school is one of the stages in the development of a student's creative thinking. It is important for the teacher to make it clear to the child that the subjects provide basic knowledge. But there is always the opportunity to expand and deepen them with the help of research activities.

Question 2: Creative thinking is a component of functional literacy, which is commonly understood as the ability of a person to use his thinking and imagination to develop and improve ideas, form new knowledge, solve problems, etc.

Thinking is a socially conditioned mental process, inextricably linked with speech, of searching for and discovering something new, i.e. the process of generalized and indirect reflection of reality in the course of analysis and synthesis. While creative thinking is the ability of a person to use his thinking and imagination to develop and improve ideas, form new knowledge, and solve problems. The development of creative thinking is necessary for research activities. A non-standard way of thinking and reasoning of the phased course of research work is the development of creative thinking. Creativity combines the two characteristics of intelligence plus imagination to form conclusions based on the information received. For example, when studying the topic of leaf fall, synthesis and analysis are sufficient to explain the men-

tal process of thinking: understanding the phenomenon of leaf fall and at what time of the year it occurs. Perhaps additional literature that will expand this concept. For creative thinking, imagination is already connected: what if we follow the process of leaf fall, what conditions are necessary for it, how it can be tracked and recorded. When kids say "I have an idea!" This is what creative thinking is. That is, the child, by connecting imagination and intellect, offers new, unusual, non-standard ways of knowing the world around him. Creative thinking is a component of functional literacy, which is usually understood as the ability of a person to use his thinking and imagination to develop and improve ideas, form new knowledge, solve problems, etc.

Respondent 5. Question 1. Support for gifted children. The group of gifted children can include students who: have higher intellectual abilities, susceptibility to learning, creativity and manifestations compared to the majority of other peers. A gifted child is characterized by an insatiable cognitive need; they experience the joy of mental labor; they are characterized by a high rate of development of the intellectual and creative spheres, depth and unconventional thinking, the ability to think and analyze outside the box, the desire to work hard, responsibility, independence and purposefulness. I.G. Pestalozzi said that "... my students will not learn new things from me, they will discover this new thing themselves. My main task is to help them open up, develop their own ideas." This can be seen as the main task in working with gifted children.

Question 2: Think outside the box. Have your own solution. Neither according to a template, nor according to an algorithm, but its own. Even if the program is higher.

Respondent 6. Question 1. The relevance of the development of the cognitive interest of students. It lies in the fact that, according to federal educational standards, it is necessary to form in students the ability to learn — a basic skill for their further development. Modern education sets itself the task of preparing a graduate who, in addition to mastering a set of knowledge, will easily apply them in real life situations, have creative potential, be able to think outside the box, show their creative abilities and intellectual and cognitive skills and critical thinking.

Question 2: The creative abilities of students stand out, first of all, when performing various types of tasks. This can be seen when, instead of the traditional table, the child makes a mental map. Creativity is a somewhat different concept in our understanding. It is the student's ability to answer a question in such a way that he completely breaks out of the mold. Or, more importantly, ask a question that will require the search for additional information, discussion, brainstorming. In modern society, both of these qualities are very important, so in our activities we make efforts to further

develop them. I gave the mental map in this example as an example of a child's creative approach to a task in which this type of work was not mandatory — i.e. a sample was not given, a qualitatively new product was produced from standard elements. Naturally, everyone can cope with it, if the teacher sets such a goal. I do not undertake to independently draw a conclusion about the differentiation of creativity and creative abilities, because this is not my subject area and I will not be able to professionally and methodically competently approach this issue. In my reasoning, I rely on the studied works of modern researchers, including when writing our article. The questions I have listed can be solved through creativity, flexibility of thinking, imagination, but in any case, one of the tasks of the teacher is to develop this in children. I will continue to study and find answers to your questions.

Respondent 7. Question 1. Using the example of the implementation of the Smart Holidays program, we focus on the fact that the formation of functional literacy in primary school is one of the most important issues in the development of our education. Educational standards consider functional literacy as the ability to solve various life situations. Functional literacy includes global competencies and creative, out-of-the-box thinking. Creative and critical thinking is the ability of a child to independently or in a team come up with and improve ideas. For a person who wants to be successful, it is most important to have leadership qualities, non-standard thinking, strive for self-improvement. And here a serious problem arises, how to lay the foundations of this literacy, with the help of what pedagogical technologies, techniques, methods, how to educate a functionally literate person. The Smart Holidays project provides more opportunities for students to apply the knowledge gained in practice, which contributes to the development of functional literacy components in them. In the extracurricular activities of the project, story games were effectively used. Children felt responsible for their actions in the game, which will help them avoid mistakes in adulthood. The conducted classes developed in children the ability to think creatively, communicate, work in a team, and lead groups.

Question 2. Creativity is the ability to create something new, non-standard, different from the usual. This quality distinguishes a good specialist from an ordinary employee who performs the assigned tasks. Creative thinking is the ability of a person to use his imagination to develop and improve ideas, form new knowledge, and solve problems that he has not encountered before. Creative thinking is the process of creating something new by combining and interweaving different areas of knowledge. Creativity makes the process of thinking exciting and helps to find new solutions to old life problems. Creative thinking is one of the components of functional literacy. Functional literacy is aimed at creative, open

thinking, finding non-standard ways to solve problems, based on existing knowledge and the ability to extract the missing information on your own. In other words, creative thinking is the ability to look at things from a unique perspective, notice patterns that are not obvious, approach life's problems in an unconventional way, and use knowledge and imagination to accomplish these tasks. Creative thinking makes it possible to make non-standard decisions, bypassing any algorithms or common sense. It assumes that several answers can be given to one question, which is the condition for the birth of original ideas and self-expression of the individual. Creative thinking helps you respond faster to tasks, skillfully get out of difficult situations, live out of a pattern and create interesting ideas. People with creative thinking are able to think outside the box and find non-standard solutions for standard situations. To have non-standard thinking means to be able to find new approaches and unusual solutions in any situation, to see the world differently than most people. Non-standard thinkers have originality of thinking and intuitively look for unusual solutions to problems, not adhering to previously known rules and patterns. The development of non-standard thinking, creative abilities of students is facilitated by design and research activities, since as a result a new product appears.

Thus, according to the majority of teachers surveyed, it is not productive thinking, but the ability to solve problems in a non-standard way — creativity — helps the student find a solution, sometimes bypassing the cultural method and common sense.

At the same time, a number of educators openly admit to the conditional use of this term: "As for the definition of creativity, we leave the consideration and study of this issue for ourselves in the future", or: "I do not undertake to independently draw a conclusion about the differentiation of creativity and creative abilities, this not my subject area. I will not be able to professionally and methodically competently approach this issue. In my reasoning, I rely on the work of modern researchers".

From this it follows that the idea of a scientific classification of the basic psychological concepts of human cognitive activity, such as intelligence, thinking, creative abilities, creativity, causes some difficulty for practitioners, since they are ambiguously disclosed in the reports presented. This requires an appeal to the theoretical foundations for the development of these concepts.

From theory to practice

1. *From the history of the issue.* The development of the concept of "creativity" has a long history, but the development of the concept of "creativity" in the 50s is

fundamental for the issue under consideration. of the last century, the problems of creativity by the American psychologist J. Guilford [12, 23, 24].

The crisis that arose in the middle of the last century in the United States required the identification of people capable of creativity. However, a century of testing creativity on IQ tests has proven that they do not reveal the ability to be creative, even if they have extremely high scores. Consequently, giftedness, understood since the Renaissance as the height of abilities, does not characterize creative potential. This forced the American scientist J. Guilford to include in the testing system a special indicator of creativity Cr (literally – creativity), in contrast to the indicator of intelligence. Noting that divergent thinking, as the main indicator of creativity, “acts wherever trial and error thinking takes place” [12, p. 442], he notes that ignoring the most valuable qualities of creativity is due to the fact that most of the research went within the framework of behaviorism, in which studies of learning were carried out on animals: “*Tvorchestvo* is difficult to observe from the hill of behaviorism, since insight is rarely found in animals” [12, p. 443].

The courage of the scientist allows him to fix the inconsistency of this position. However, the theory of J. Guildford remains within the framework of behaviorism [7].

2. *Author's approach.* As a theoretical basis for our research, we consider the approach of an unsurpassed scientific authority – the philosopher G. Hegel. For the first time, he considered the concept of development not on the basis of growth, but on a qualitative change. The contradiction allows development to occur not in a vicious circle, but progressively – from lower forms to higher ones. The level of the individual, the particular, the universal acts as these forms. In Hegel's system, the whole is considered as a unity of contradictions [11]. Hence the “unit of analysis” L.S. Vygotsky as the unity of “affect and intellect” [10]. Hegel substantiated this scheme of self-development primarily on the material of the historical development of various spheres of spiritual culture (philosophy, religion, art).

Trying to prove his commitment to Marxism, L.S. Vygotsky explores the “unit” singled out by K. Marx and goes to the original position of G. Hegel. In his appeal to a psychology that wants to study complex unities, Vygotsky demands that the methods of decomposition into elements be replaced by methods of analysis that single out units [10, p. 29], which finally provides a way of re-

vealing the nature of creativity no longer by the product, but by its very mechanism. Hence the “unit of analysis” L.S. Vygotsky as a unity of “affect and intellect” [10]. The evidence that the actions of the mind, its direction are determined by the personality, was generalized by L.S. Vygotsky: “Whoever tore off thinking from the very beginning from affect, he forever closed his way to explaining the causes of thinking itself” [Vygotsky L.S., 2019, p. 11]. magazine[6] we gave a detailed analysis of the formation of the cultural-historical approach of L.S. Vygotsky.

However, the described process does not yet go beyond productive thinking and the presence of a dominant. Outside remained phenomena of “spontaneous” discoveries. This fact was not reflected by scientists, since within the framework of the method of problem situations, the psychologist could not observe a process other than that associated with the solution of the tasks set. Because of this, the motive of achievement is the leading motivation (it is the highest in Atkinson's structure).

Unlike Gestalt psychologists¹ [9], who introduced the method of solving problem situations into the study of the thinking process, having overcome the method of associations (which was creatively developed in Russian psychology by the schools of S.L. Rubinshtein and A.N. Leontiev [4; 16; 17; 18]), we succeeded to develop the “Creative field”² method [2; 3; 5; 6]. This method made it possible to fix not only the process of solving the tasks presented, but to diagnose the entire process of activity. The levels singled out using this method coincide with the levels singled out by Hegel. The unit level corresponds to the level “stimulus-productive” – a given activity to solve specific problems. The data obtained at this level make it possible to judge the level of intelligence according to all the learning parameters identified by Z.I. Kalmykova and N.I. Menchinskaya [14]. If the work of the subject takes place only within the framework of solving the tasks presented, then with varying degrees of success, including highly successful, we attribute it to the stimulus-productive level. This is activity at the individual level.

The level of the special corresponds to the “heuristic” level. This is a deep layer, masked by the “outer” layer and not obvious to the subject, this is the activity of revealing hidden patterns that the entire system of tasks contains, the discovery of which is not required to solve them. Here the person goes beyond the initial requirements. On this basis, we attribute it to the heuristic level and state that it has the ability to be cre-

¹ The protest against the reproduction of associationism as the first direction of psychology as an independent science led to the design at the beginning of the 20th century two directions: Gestalt psychology, which left the phenomena of consciousness as the subject of psychology, but replaced the process of associations with the process of thinking, and behaviorism, in which the subject of psychology was replaced by behavior and the method of associations remained.

² In 1969, the term “creativity”, used at that time only by journalists, was perceived as a synonym for the concept of creativity.

ative, i.e. giftedness. It is always expressed, to varying degrees, emotionally.

The level of the universal corresponds to the “creative” level – the level of theory construction. An independently found empirical regularity can not be used only as a solution, but acts as a new problem. The patterns found are subject to proof. This is the level of posing new problems and building theories. Here, the analysis is carried out at the level of the general, providing knowledge of the essence of the object.

Enthusiasm, preoccupation with activity leads to the fact that the process does not stop even when the initial task is completed. What a person does with love, he constantly improves, realizing all the new ideas born in the process of the work itself, i.e. exhibits self-awareness. As a result, the new product of his activity significantly exceeds the original plan. In this exit into the “unpredictable”, the ability to continue cognition beyond the requirements of a given situation, in an action that loses the form of a response, lies the secret of the highest forms of creativity. At this level, giftedness cannot be determined only by the level of development of abilities [22]. The intellect in this unity ensures the successful mastering of the activity, and cognitive motivation ensures its further development. The specific ratio of these factors is determined in the process of their integration. The intelligence of subjects can be equal at all levels as shown in different dimensions, but they are distinguished by dominant motivation³ [3].

Conclusion

The introduction of the methodology of bioheviarism into our education system in the 90s, in our opinion, explains the observed terminological confusion in the minds of teachers. The attitude to the term “creativity” by J. Guilford as an indicator of creativity, in contrast to an indicator of intelligence, is also facilitated by its translation into Russian as “*tvorchestvo*”. Hence the logical answer is that creativity and creativity are related concepts.

On the one hand, “creativity is the ability to create something new, non-standard, different from the usual”; “Creativity is extraordinary. This is a different vision, a different perception”.

On the other hand, “creative thinking is the ability of a person to use his imagination to develop and improve ideas, form new knowledge, solve problems that he has not encountered before, or it is the ability to solve tasks in a non-standard way.”

Thus, teachers in matters of developing students’ ability to be creative began to appeal to the concept of creativity as a specific ability (according to Guilford) and a panacea that ensures academic and life success.

Against the background of professionally built training programs, the absence of the concept of “productive thinking” among teachers is striking.

It is also significant that in the scientific literature using the term “creativity” there is no mention of the methodology of behaviorism, there is no understanding that this indicator is associated with the mechanism of associations, and the sign of originality in its everyday interpretation dominates in the minds of practitioners. In fact, creativity is considered as the highest productive process, due to the joint action of intellect and imagination.

But if we talk about the nature of the thought process not within the framework of behaviorism, but in the world scientific methodology, then the mechanism of creativity and the role of imagination in it were described in Soviet psychology within the framework of the school of S.L. Rubinshtein [4] and further confirmed in subsequent works of major domestic experts: N.I. Zhinkin, D.B. Elkonin, V.T. Kudryavtsev and others (see, for example, [15]). The consideration of figurative-spatial figures outside of thinking is also criticized by L.M. [8].

We find similar positions on the role of imagination in the process of thinking and creativity in world psychology. Thus, M. Heidegger writes that “the hidden unity of vision (imagination) and hearing determines the essence of thinking” [20]. R. Arnheim writes about visual thinking [1]. G. Hunt subtly formulated this unity as a “perceived meaning” [21]. He explains it by the role of “intermodal translation” implemented by the new cortex in humans.

The lack of a clear differentiation between productive thinking as a means of solving problem situations and the process of creativity in Russian psychology (since the productive process was limited only to solving problem situations) led to the fact that even in highly professional and scientific works, and in educational practice, problem solving is interpreted as creative thinking [13].

Naively believing in the contiguity of the concepts of “*tvorchestvo*” and “creativity” (in the understanding of J. Guilford), which, unfortunately, strengthens the already established tradition in the scientific world, a professional teacher actually contradicts the scientifically based methodology as a decisive factor in the development of Russian education.

³ Here I would like to recall the theory of “kaleidoscopism” by V. Frankl, who wrote that in order to see the world, one must forget about oneself [19].

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